

## **Effects of hot water, submergence time and storage duration on quality of dragon fruit (*Hylocereus polyrhizus*)**

### **Abstract**

This study was conducted to determine the effects of hot water temperature, time of submergence and storage duration on dragon fruit (*Hylocereus polyrhizus*). Fresh harvested dragon fruits were treated with hot water temperatures at 35, 45 and 60 °C and time of submergence for 15, 30 and 60 minutes for 0, 5, 10 and 15 days of storage. The result showed that the hot water temperature significantly affected ( $p < 0.05$ ) the percentage of weight loss, titratable acidity (TA) and firmness of dragon fruit. The highest percentage of weight loss (12.80 %) was the fruit treated with hot water at 60°C and submergence for 60 minutes whereas the lowest percentage of weight loss (5.05 %) was the fruit treated with hot water at 35 °C for 60 minutes. Dragon fruit treated with hot water at 35 °C has high percentage of TA, 2.44 %. Fruit which was submergence in hot water at 35 °C showed the highest fruit firmness. The result also showed that the interaction between the three factors significantly affected ( $p < 0.05$ ) the percentage of weight loss, TA and pH of the fruits. TA decreased and pH increased for the fruit treated with hot water at 35 °C and submergence for 60 minutes. The interaction between hot water temperature at 35 °C and time of submergence for 60 minutes effectively reduced the weight loss and acidity of the dragon fruit ( $p < 0.05$ ). The shelf life and quality of dragon fruits can be extended using proper submergence time of hot water treatment.